

CLAIMS

What is claimed is:

1. 4-Cyclopentyl resorcinol monohydrate.
- 5 2. Form I polymorph of 4-cyclopentyl resorcinol monohydrate.
3. A crystalline polymorph of 4-cyclopentyl resorcinol monohydrate that exhibits an X-ray powder diffraction pattern having a characteristic peak expressed in degrees 2θ at approximately 8.1.
- 10 4. A crystalline polymorph of 4-cyclopentyl resorcinol monohydrate that exhibits an X-ray powder diffraction pattern having a characteristic peak expressed in degrees 2θ at approximately 23.8.
- 15 5. A crystalline polymorph of 4-cyclopentyl resorcinol monohydrate that exhibits an X-ray powder diffraction pattern having characteristic peaks expressed in degrees 2θ at approximately 8.1 and 23.8.
- 20 6. The crystalline polymorph according to claim 5 that exhibits a characteristic peak expressed in degrees 2θ at approximately 16.2.
7. The crystalline polymorph according to claim 5 which exhibits at least one peak expressed in degrees 2θ at approximately 20.0 and 25.8.
- 25 8. The crystalline polymorph according to claim 5 which exhibits at least one peak expressed in degrees 2θ at approximately 13.9, 14.3, 18.4, 19.3, 20.0, 21.3, 25.8 or 26.5.
- 30 9. The crystalline polymorph of claim 2, which exhibits an X-ray powder diffraction pattern substantially similar to that depicted in Figure I.

10. The crystalline polymorph of claim 2 which exhibits an X-ray powder diffraction pattern substantially similar to that depicted for Lot #'s 2, 3, or 4 in Figure III.

5 11. A crystalline polymorph of 4-cyclopentyl resorcinol monohydrate that exhibits a single crystal X-ray crystallographic analysis at 160 K with crystal unit cell parameters that are equal to the following:

Table I

10 Space Group and Unit Cell Parameters for Form I Polymorph

Form	I
Crystal system	monoclinic
Space group	$P2_1/c$

15 Cell Dimensions

$a(\text{\AA})$	11.313 ± 0.001
$b(\text{\AA})$	7.495 ± 0.001
$c(\text{\AA})$	12.881 ± 0.001
$\beta(^{\circ})$	110.00 ± 0.01
Volume(\AA^3)	987 ± 1
Z(Molecules/unit cell)	4
Density (g/cm^3)	1.27 g/cm^3
Temperature	160 K

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12. A method for lightening skin comprising administering a compound according to claim 1 to a patient in need thereof.

13. A method for reducing pigmentation in skin comprising administering a
30 compound according to claim 1 to a patient in need thereof.

14. A pharmaceutical formulation comprising an effective amount of a compound according to claim 1 in admixture with at least one pharmaceutically acceptable carrier.
- 5 15. A process for producing 4-cyclopentyl resorcinol monohydrate comprising contacting 4-cyclopentyl resorcinol with an admixture of a suitable recrystallization solvent and water under conditions suitable to initiate the precipitation of said 4-cyclopentyl resorcinol monohydrate from the admixture and optionally collecting said 4-cyclopentyl resorcinol
10 monohydrate.